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THE NATURE CONSERVANCY NEWS

November/December 1978

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THE NATURE CONSERVANCY NEWS

VOLUME 28, NUMBER 6
NOVEMBER/DECEMBER, 1978

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The Nature Conservancy

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COVER: Amid the tall grasses of Cherokee Prairie, Iowa. Photo by Jim Brandenburg.

The Nature Conservancy is a national conservation organization committed to the preservation of natural diversity by protecting lands containing the best examples of all components of our natural world.
To date the Conservancy and its members have been responsible for the preservation of 1,312,461 acres of forests, marshes, prairies, mountains, and islands: home to rare and endangered species of wildlife and plants. 2,022 projects have been completed since the acquisition of the first preserve in 1954. Approximately 60% of all preserves are retained by the Conservancy and managed by volunteer land stewards.
A membership, non-profit organization, the Conservancy was incorporated in 1951 in the District of Columbia for scientific and educational purposes.

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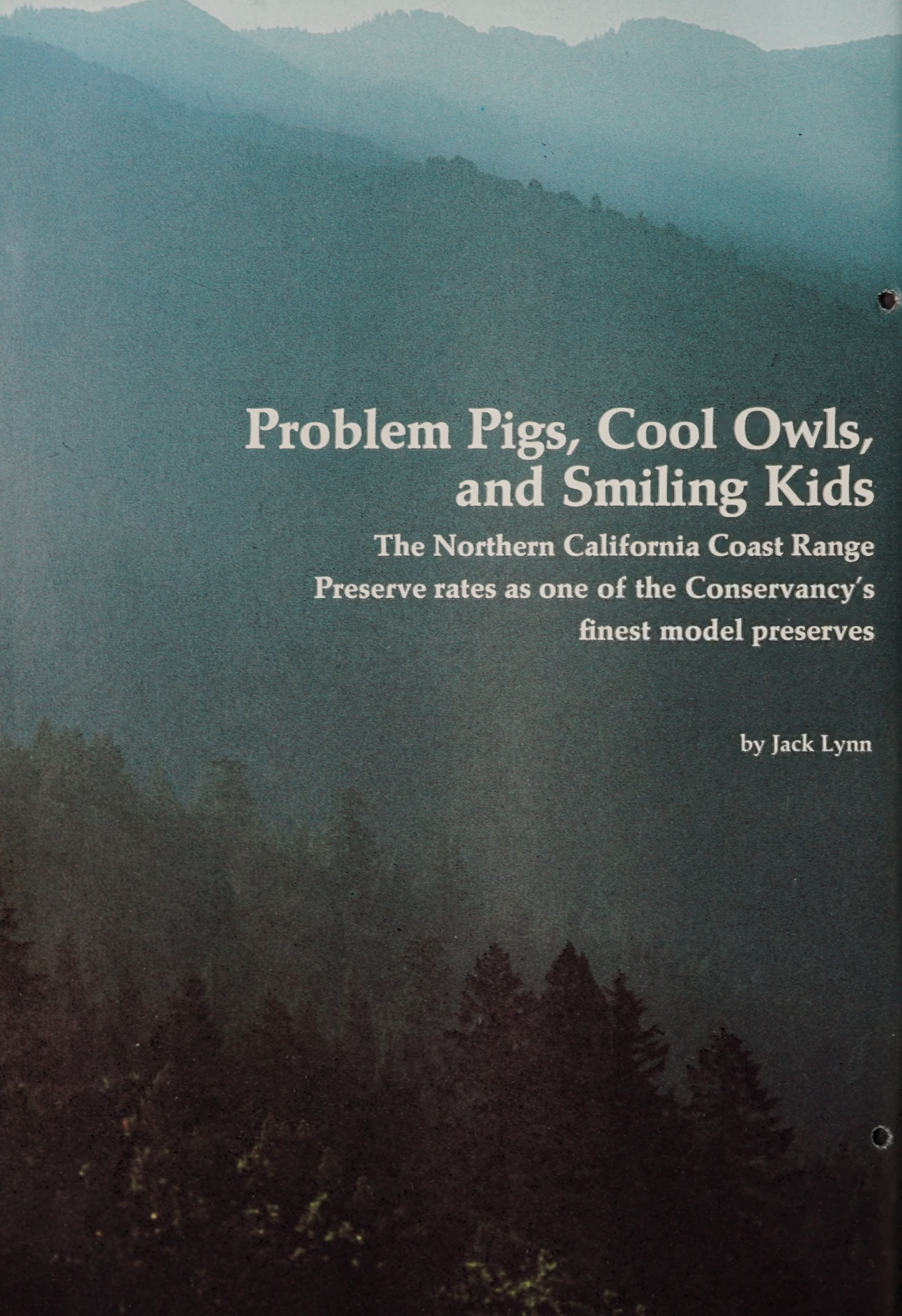


Problem Pigs, Cool Owls, and Smiling Kids

The Northern California Coast Range Preserve rates as one of the Conservancy's finest model preserves

by Jack Lynn

They poured into California looking for gold. When the 24 karat grin began to fade, they marched along the coast to fell the redwoods. Some of the early Californians even stayed to homestead and moved inland along the tributaries of the Eel River, 180 miles north of San Francisco.

Hiking the shady trails that twist beneath 200-foot virgin Douglas-firs, thread across sun-splashed meadows, and climb through thick chaparral, you can appreciate the respect those early pioneers had for the steep, rocky mountains of the California coast range. Stepping backward in time is easy only because at the Conservancy's 4,000-acre model preserve near Branscomb, the trees are uncut, the streams run clean, and the wildlife roams free.

Sometimes shrouded by wet winter fogs that roll in from the Pacific a scant 10 miles to the west, the Northern California Coast Range Preserve safeguards what researchers believe is the finest example of California's coastal forest as it was before the timber crews, sawmills, and shingle cutters carved away the tall trees. Because the preserve includes an entire watershed and consequently has

a natural perimeter, because the touch of humans has been light over the last hundred years, and because of its unique natural qualities, the Northern California Coast Range Preserve has earned special status among the 700 or so Conservancy-owned sanctuaries. The preserve, its unwieldly title usually shortened to NCCRP, has been designated a "model" preserve, one of only 31 in the nation.

To tuck NCCRP away behind a high fence would not do, so the preserve's young managers, Steve and Sharon Johnson, are constantly at the center of a variety of activities. Researchers walk the high ground, seeking and often finding signs of North America's largest cat, the puma, that hunts the back country. With eyes toward the ridge line, groups of lay ornithologists look for swift goshawks, even faster peregrine falcons, and an occasional soaring bald eagle.

Scientists armed with lightweight radios track the descendents of the hogs that escaped the pens —and ultimately the black iron skillets—of the settlers along Elder Creek, a branch of the Eel. The animals, long ago gone wild, may be causing permanent damage to plant life in parts of the preserve, but nobody knows for sure. To find out how the hogs live, a graduate student from Sacramento State University trapped a number of 150-pound porkers. He strapped transistorized transmitter collars around their thick necks and turned the pigs loose. Transmissions from the collars on the wandering hogs were used to trace the animals' movements. Information from the hog study—which has shown, among other things, that the original domestic swine have been joined by recently escaped European wild pigs—is now beginning to answer questions about the actual impact of the roaming, rooting animals.

During the summer the temperature at NCCRP can reach 100°F. Even in the relative coolness of the dense forest, the mercury pushes upward to uncomfortable heights. Last summer two students from the University of California discovered that humans were not the only animals to whom the bright midday sun brought discomfort. The researchers, keeping an eye on four pairs of rare spotted owls nesting on the preserve, found that the brown and white birds seem to suffer severely on the hottest days. Once two of the adults were spied bathing in a small stream. After their baths the birds appeared to remain cool for hours. Assuming that spotted owls have a limited tolerance to heat, the students postulated that naturally air conditioned old-growth forests and nearby cool, unpolluted streams are essential to the survival of the spotted owl.

But a Conservancy project needs more than just

In a study of the wild hogs that roam NCCRP, the animals were fitted with radio collars so that their movements could be easily traced.

birds to be a model preserve. It must have people. Where it makes sense and where it's compatible with the reasons for preservation, one of the criteria for a model preserve is that the area serve as a focus for environmental education programs. NCCRP meets the test. The preserve boasts its own natural history association with a varied membership ranging from neighbors in nearby Branscomb to occasional visitors from the east coast. The association organizes natural history outings, sets up workshops and education programs, develops trail guides and interpretive materials, and even publishes a quarterly newsletter.

Under the tutelage of volunteers, local school children frequently visit NCCRP to explore the streams, meadows, and wooded paths of the preserve. The kids peer under rocks, scan the sky, touch the leaves—all the time learning about the natural world and their place in it. Throughout the year novice biologists, ecologists, botanists, and geologists, students at universities and colleges in northern California, come to investigate the balanced and working natural systems of the sanctuary.

About 4,000 acres of government-owned land, administered by the federal Bureau of Land Management, adjoins the Conservancy holdings. The Bureau and the Conservancy have worked out compatible plans for the future of the Elder Creek watershed—of which NCCRP is a part—that protect the wild, natural character of the area. Under terms of a cooperative agreement, the Conservancy manages the federal land as a part of the preserve. The arrangement brings the total protected lands to about 8,000 acres. As a dividend from the pact, 20 participants in the federally-sponsored Youth Conservation Corps have been at work on Conservancy and neighboring lands. They surveyed and built a trail through the BLM property linking the federal lands to Conservancy holdings. By next year inquisitive, intrepid hikers will be able to climb the trail to the 3,708-foot summit of Black Oak Mountain. Their reward will be a panorama of unbroken forest and blue Pacific Ocean.

As at the Conservancy's Virginia Coast Reserve on the Atlantic seaboard, the model preserve aspect of NCCRP also includes preservation of historic buildings. One of the very first cabins, now unused, was that of the Lovejoys, who came from Maine and were the third family to settle in the valley. If the money can be found, the Lovejoys' trim white house will become a small museum with exhibits telling the story of the valley and its inhabitants.

The stands of Douglas-fir, the redwoods following the Eel River inland, and the old buildings remain today largely through the efforts of Heath Angelo and his late wife, Marjorie. They purchased much of the land that is now NCCRP. Mr. Angelo's love for the wilderness dates back to his first visit to the area in the early 1900's. Still a resident of the preserve, he saved the land and its trees during the resource-reckless decades of the 40's and 50's. The Conservancy began its stewardship of the preserve when it purchased the area in 1959.

NCCRP is an ideal place for schoolchildren to learn firsthand about the natural world.

The visitors center at NCCRP is in sharp contrast to the quiet trails and soft sounds of the deep forest. Coping with requests for research, opportunities for education, and supplying information to hikers, photographers, and naturalists keeps the phone ringing and the small parking lot busy.

But at night when a bright harvest moon lights up the darkness and the chilling scream of a puma slices the silence, you are in the forest primeval. You instinctively realize *Homo sapiens'* unquestionable interdependence with the natural world. It is that relationship which the Conservancy's model preserves seek to illustrate. At NCCRP, the picture could not be more clearly drawn.

Jack Lynn heads up the Conservancy's Communications department. He has also worked as a freelance writer and photographer.

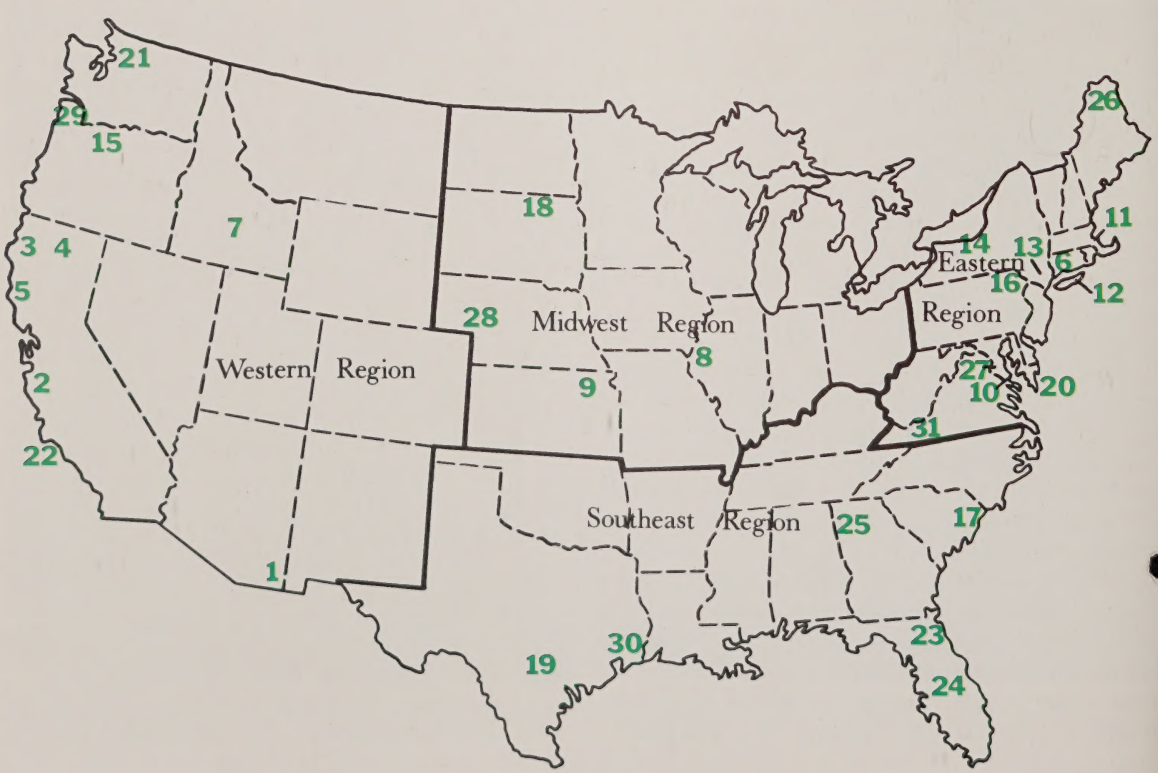
The Conservancy's Model Preserves

A "model preserve" is an area which exemplifies the finest Conservancy projects. It is an ecologically significant area, often protecting rare or endangered plants or animals, a rare ecosystem, or an outstanding natural feature. The land is unique in its natural qualities, relatively free from human impact, and viable as a preserve. Remaining in Conservancy ownership, a model preserve serves as an outdoor laboratory for research and education and often becomes a center for various forms of compatible public use.

1 Ramsey Canyon/Mile Hi Ranch, Arizona
2 Elkhorn Slough, California
3 Lanphere-Christensen Dunes, California
4 McCloud River, California
5 Northern California Coast Range Preserve, California
6 Devil's Den, Connecticut
7 Silver Creek, Idaho
8 Cedar Glen Eagle Roost, Illinois
9 Konza Prairie, Kansas
10 Battle Creek Cypress Swamp, Maryland
11 Black Pond, Massachusetts
12 Atlantic Double Dunes, New York
13 Manitoga, New York
14 Thousand Acre Swamp, New York
15 Lawrence Memorial Grassland, Oregon
16 Lacawac Sanctuary, Pennsylvania
17 Santee Coastal Reserve (Washo), South Carolina
18 Samuel H. Ordway Memorial Prairie, South Dakota
19 Ezell's Cave, Texas
20 Virginia Coast Reserve, Virginia
21 Skagit River Bald Eagle Sanctuary, Washington

Proposed Model Preserves

22 Santa Cruz Island, California
23 Theodore Roosevelt Memorial Preserve Florida
24 Tiger Creek, Florida
25 Marshall Forest, Georgia
26 Crystal Bog, Maine
27 Nanjemoy Creek, Maryland
28 Arapaho Prairie, Nebraska
29 Rockaway Relict Oldgrowth, Cedar Swamp, Oregon
30 Roy E. Larsen Sandylands Sanctuary, Texas
31 Falls Ridge, Virginia



Model Preserve Portfolio

EIGHT OF THE BEST

Student and teacher, Devil's Den

DEVIL'S DEN, Connecticut

Comprised of large inland marshes and huge upland ledges, the Lucius Pond Ordway Preserve—known locally as Devil's Den—contains most of the watershed of the West Branch of the Saugatuck River. The 1,472-acre Den also includes the watershed of the Perry, Godfrey, Sapbrook, and Ambler Brooks.

Devil's Den offers a variety of research, educational, and recreation programs. Students from nearby Fairfield University and other colleges have studied the preserve's rich soils, geology, diverse wildlife, and vegetation. A college credit course called "Ecological Study of Devil's Den Preserve," offered through Fairfield University, is taught by Clifford Emanuelson, Director of the sanctuary. Guides have been printed that enable a visitor to identify many shrubs and trees or the countless brilliant and delicate wildflowers of spring, summer, and autumn. Archaeological sites, such as the charcoal pits that were abandoned at the end of the 19th century, have been examined. Indian relics thought to be over 3,000 years old are on display in the preserve's meeting room, along with a herbarium of over 400 specimens. Twenty miles of hiking trails meander through dense forests of chestnut oak, maple, and beech, past rushing brooks and ponds with active beaver dams, and down the rugged Ambler Gorge. The Den also has miles of bridle paths, which double as winter skiing trails.

A volunteer community-use program has proved so successful that it now attracts more and more visitors. Developed with funds from the Charles Stewart Mott Foundation, the program trains volunteers from the community to serve as conservation aides and guides. They work with teachers and students, youth groups, garden clubs, and many other groups.

MILE HI/RAMSEY CANYON, Arizona

Stretching across the mouth of the deep, winding Ramsey Canyon, Mile Hi Ranch is a registered National Natural Landmark. It is the "Hummingbird Capital of the U.S.," where 14 species of the delicate little birds have been seen and photographed. They include the white-eared hummingbird, rarely seen anywhere else in the U.S. but in Ramsey Canyon, and the rare violet-crowned hummingbird. This past year a pair of berylline hummingbirds fledged two young in the preserve, the first successful U.S. nesting record.

A model preserve, Mile Hi is operated by the Conservancy for the enjoyment of naturalists and birders. Jim Anderson is the Preserve Manager for Ramsey Canyon, while Rick and Connie Hewett are managers of the Mile Hi cottages, book store

Coatimundi, Ramsey Canyon

and gift shop. Tucked beneath Arizona sycamores, the cottages are available for visitors to rent year 'round while watching and photographing the incredible diversity of birdlife.

The sanctuary offers a variety of activities. A half-mile birding and nature trail winds along Ramsey Creek and up the steep-sided canyon. The Preserve Managers provide natural history interpretations of the area. There is a night observation station where guests can see many of the canyon's nocturnal mammals, such as javelinas, coatimundis, and a ring-tail cat that visits Mile Hi almost every night during fall, winter, and early spring. All four species of skunk found in the U.S. have been seen in Ramsey Canyon. "Owl prowls" are frequently offered—trips into other hidden canyons where whiskered, screech, and elf owls are found. Spotted and flammulated owls have also been seen. Slide programs are often held, and the preserve contains a small reference library and herbarium. If you would like more information on facilities and rental accommodations, write or call the Ramsey Canyon Preserve, R.R. 1, Box 84, Hereford, AZ 85615. Phone number: 602/ 378-2785.

Ordway Prairie wetland

SAMUEL H. ORDWAY, JR., MEMORIAL PRAIRIE, South Dakota

The 7,600-acre Samuel Ordway Memorial Prairie is the largest grassland sanctuary both owned and managed by the Conservancy. Nestled in the prairie pothole region of the north-central U.S., Ordway's 400 wetlands attract thousands of breeding pairs of waterfowl annually. The prairie supports over 300 plant species, including such appropriately named grasses as needle and thread, foxtail, porcupine grass, and Indian grass. Flowering herbs—called forbs—add their brilliant colors and textures to the sea of green: red blazing star, yellow painted-cup, prairie smoke, and fuzzy field pussytoes. The outstanding qualities of this grassland have led to its designation as a Conservancy model preserve.

Paul Bultsma was hired in 1976 to manage the Ordway Prairie and to coordinate research. With the aid of an advisory council, Paul has developed an ambitious plan for the prairie that will restore the plant community's composition to what it was when seen by the first settlers. Native bison, which had been driven to the brink of extinction, once again roam Ordway's swells and swales. Just last year 64 giant Canada geese were released on the prairie. The flock is maintained specifically to replenish areas from which the great birds have disappeared.

Through the studies of the Ordway Prairie Research Station, which is located on the preserve, the Conservancy will be able to better understand and manage our country's vanishing grasslands. For instance, students and scientists from South Dakota State University and Augustana College have been studying the prairie's diverse species of plants and wildlife, learning what ingredients make a plant grow or how far a coyote may roam. The Ordway Prairie also serves the surrounding community as an educational center for field studies and outdoor classes. High schools and colleges use the facilities; so do groups interested in photography, wildlife and range management, and conservation.

ROY E. LARSEN SANDYLAND SANCTUARY, Texas

Lying along the eastern bank of a sinuous 7.6-mile stretch of Village Creek, the Larsen Sanctuary is a large expanse of arid sandylands, one of the seven ecosystems comprising what has been called the "Biological Crossroads of North America"—the Big Thicket. The preserve contains some 340 species of wildflowers, as well as the United States'

Snow geese and sandpipers, Virginia Coast Reserve

largest gallberry holly and four representative species of fascinating insect-eating plants: bladderwort, butterwort, sundew, and pitcher plant. The opportunities for research in such a biologically rich area are endless.

Ike McWhorter has been hired as Preserve Director to develop and implement the model preserve program for Sandyland. In addition to scientific research, the sanctuary will be used for imaginative educational and public-use programs aimed at environmental awareness and nature appreciation. Nearby schools and civic and conservation organizations are being notified of Sandyland's availability as an outdoor classroom, and local universities, such as Lamar in Beaumont and Rice in Houston, will be able to use the preserve for scientific studies. The programs being developed at the Roy E. Larsen Sanctuary will also open the preserve to the community, so that everyone can enjoy one of our country's most remarkable natural wonders.

VIRGINIA COAST RESERVE

Stretching from the Virginia-Maryland border south to the mouth of the Chesapeake Bay is a 45-mile-long chain of uninhabited islands—the Virginia Coast Reserve. From the tiniest organism thriving in one of the island's pristine coastal marshes to a huge flock of snow geese soaring overhead, the 13 barrier islands of the Reserve comprise a complete, functioning natural system that is unsurpassed for its rich and immense productivity. They are the finest examples of undisturbed coastal islands remaining in the United States today.

Managers of the islands, Rod Hennessey and Barry Truitt, administer the Reserve's model preserve program from mainland headquarters at Brownsville, near Nassawadox, Virginia. Brownsville, with its spacious 200-year-old house lying amidst 1,400 acres of woodlands, green marshes, and fields, provides the managers access to the 13 VCR islands.

Research on the fragile islands began some time ago with an intensive and exhaustive two-year study that helped the Conservancy to better understand the natural and historical make-up of the sandy isles and to plan for proper protection and use of the Reserve. More recently, Old Dominion University, in collaboration with the Conservancy, has established a field station at Brownsville for use by students enrolled in oceanography, marine, and environmental studies. The station is the first step in creating a research consortium of six to ten universities where students and faculty from all over the eastern U.S. can observe the dynamics of this unaltered, rich island ecosystem.

The public-use program for the barrier islands encourages day use of many parts of the Reserve, including such activities as hiking, swimming,

beachcombing, nature study, surf-fishing, and photography. The Conservancy is now offering tours of the islands, which will give visitors rare opportunities to see the tremendous concentrations of shorebirds, seabirds, and migrating and wintering waterfowl that blanket the islands.

Entrance sign, McCloud River

McCLOUD RIVER PRESERVE, California

The McCloud River has long been recognized as one of the richest and most challenging trout streams in California. After saving a six-mile stretch of the river in 1973, the Conservancy immediately did a thorough inventory of the area and came up with some very exciting results. Several species of rare native trout inhabit the streams that feed the cold, clear McCloud. One is a healthy undiluted strain of native rainbow trout; another is the McCloud Dolly varden char, previously believed to be extinct in California. The Dolly varden may have been isolated in the river's waters during the last great Ice Age.

The preserve stewardship committee developed a master plan for the preserve that protects not only the endemic fish but also the pristine watershed with its surrounding 2,330-acre forest of virgin mixed conifers. The plan also accommodates visitors. The committee's first step was to urge the California Fish and Game Commission to designate the entire McCloud River drainage a wild trout area, meaning that the top portion of the preserve is restricted to catch-and-release angling with artificial, single-hook lures and flies only. The Commission also established a Dolly varden preserve on the Conservancy's holdings, where no fishing is permitted. To complement these regulations, the Conservancy imposed a quota system limiting the use of the northern section to 10 anglers and 10 non-anglers at any one time.

The McCloud River Preserve is cared for by two resident managers, Steve Moyles and Tom Hesseldenz. They have laid out a well-marked trail and prepared displays and brochures that highlight the McCloud's unique natural history. Research activities focus on the sanctuary's value as a rare undisturbed wilderness against which we can compare similar systems that have been disrupted.

LACAWAC SANCTUARY, Pennsylvania

When a glacier retreated across the gray sandstone of the Pocono Mountains about 13,000 years ago, it created Lake Lacawac. Described by many as the southernmost unpolluted glacial lake on the continent, Lacawac lies at the heart of one of the Conservancy's most successful model preserves.

After the Conservancy acquired the Lacawac Sanctuary in 1974, the preserve stewardship committee immediately began working to increase the research and educational use of the 400-acre area. Today the sanctuary and the lake, a National Natural Landmark, serve a score of colleges and universities. Throughout the year, biologists, environmentalists, and many lay persons study Lacawac's wilderness bogs, ponds, rich marshes, and other natural systems in a continuing search to understand how humans may interact with nature without destroying it. Many more go to walk, listen,

Lacawac Sanctuary

Santa Cruz Island fox

learn, and enjoy the natural beauty that the sanctuary offers. Classes are offered in the arts and on environmental topics for both older children and adults; there are music programs, lectures, and workshops. Summer always brings regularly scheduled bird and nature hikes to this jewel of the Poconos. People wishing to visit the sanctuary are asked to do so by appointment; please call 717-689-9494.

So as to allow the community to play a greater role in the future of the sanctuary, the Lacawac Alliance was formed. The Alliance is a citizens' group that works with the preserve committee and the sanctuary staff, headed by Preserve Managers Karen and Robert Kobler. A "friends of the sanctuary" group, it helps fund raise for the preserve and assists in forming programs that will better serve the community.

SANTA CRUZ ISLAND, California

Sun-worshipping sea lions regularly haul out on the island's ledges. Endangered native foxes hunt the grasslands in search of tiny mammals. In the distance the spouting of a California gray whale sprays high into the wind-whipped air. Nearby blue waters support back-floating sea otters, while rare brown pelicans dive beneath the waves for fish.

These are only a few inhabitants or visitors of Santa Cruz, a pristine 87-square-mile island off the coast from Santa Barbara, California. It was recently acquired by the Conservancy. Under the new Preserve Steward, Ken Wiley, plans are being laid for an exciting stewardship program, probably beginning this fall.

The remoteness and inaccessibility of Santa Cruz have helped preserve its wildlife, endangered native vegetation, and 3,000 or so archaeological sites. At the same time, however, these factors have kept all but a very few people from experiencing the island's unique natural beauty and history—a problem which the Conservancy hopes to correct. Small scale environmental education programs are being designed, to be offered first to local schools and then expanded to include other educational institutions. These programs will be available particularly for children from inner-city schools who have few chances to learn about or enjoy Mother Nature at her best. A public appreciation program is also underway, featuring occasional boat trips and small group explorations of Santa Cruz's valleys, waving hills, and hidden misty coves.

Management plans for the island include removing the remaining feral sheep, so as to preserve the unique endemic plants and trees, and protecting the archaeological sites. The Conservancy is considering reintroducing the native bald eagle and peregrine falcon on Santa Cruz Island, both of which have disappeared from the area. Additional research will be conducted jointly with the University of California's Santa Barbara Field Station, which has facilities on the remote island.

Education with a Purpose

A Look at the Conservancy's Student Stewardship Program

by Bill Taylor

Participation in the Conservancy's new Student Stewardship Program gives high school and junior college students an understanding of the importance of protecting natural areas and an opportunity to learn about the interdependence of all living things. The Program is designed to involve Conservancy volunteers, teachers, responsible students, and the local community in the protection of a nature preserve. Made possible by generous grants from the Cleveland and George Gund Foundations, the Program was tested successfully on Conservancy preserves in Ohio last year by Independence High School, Lakeland Community College, Madison High School, and West Geauga High School. In the following report, Bill Taylor, Chairman of the Science Department for Independence Public Schools, tells of the experiences that Independence High School students had during the pilot program.

The Burger Preserve, donated to The Nature Conservancy in 1972, is a 38-acre natural area representative of the steep wooded slopes and ravines that form the western boundary of the Cuyahoga River Valley in Independence, Ohio. The preserve was relatively unknown within the community until 1977 when a small group of high school students, carrying out the activities of the Student Stewardship Program, talked with local community residents about the preserve and started an important inventory of the land's natural assets.

The Cleveland-based Institute for Environmental Education (IEE) was asked by the Conservancy to develop the Student Stewardship Program. IEE arranged for students of the Independence Public Schools to take part in the program. Working on environmental problems and projects was not new for Independence students. The school system has maintained its own 50-acre outdoor education cen-

ter within a mile of the Burger Preserve. However, the idea of investigating an unknown rugged woodland was exciting and challenging. Most of all, there was a purpose to the investigation—someone really wanted to know what the preserve had to offer.

Eight students—sophomores, juniors, and seniors—volunteered for the experiment. The group scheduled meetings during the school day, three times a week. Credit was offered for participation. The students knew that most of the work could not be completed during class; many after-school and weekend hours would be spent at the preserve. Class time was used mainly for organizing studies, learning techniques, and analyzing and assembling the information that was gathered.

The students' first task was to locate the actual boundaries of the preserve. While this sounds like a simple chore—and certain tentative markers were easily found—the final determination of the boundaries required the assistance of professional surveyors. The students also searched to locate the land's donors, Mr. and Mrs. Floyd Knight, who they wished to interview to learn how the Knights felt the Burger Preserve should be used. The effort paid off, and the students spent an evening with the couple. The group learned that in the early 1900's the ridges of the preserve were farmed and the land was the home of the Bill Burger family. Also, the Knights solved the mystery of the remains of a building still seen on the sanctuary—it's the old Burger estate.

The next job was to find the owners of all the properties adjacent to the preserve. The various owners—some of whom do not reside in the immediate area—were found by using the records at City Hall. The students mailed letters to all owners explaining that the Burger Preserve is a Con-

servancy holding and requesting help in protecting the area. Trash was being dumped along one of the sanctuary's boundaries. When adjacent landowners realized the importance of the property, the littering stopped.

The dumping was only one problem. With the approach of autumn the hunters arrived. The preserve is part of a rugged, wild region long known locally as a hunter's paradise. Students contacted the local game protector for assistance in safeguarding the sanctuary's wildlife. In addition, a neighbor with whom the students had talked became a valuable ally in working on the problem. Since the preserve was in the process of being transferred to Cleveland Metro Parks, students also made arrangements to have park rangers include the area in their patrols.

In December, 1977, transfer of the Burger Preserve to the Cleveland Metropolitan Park Board was officially completed. The students were now carrying out their studies under new management. Throughout the early fall they finished researching the preserve's woody plants. Rugged ravines made the job difficult, and the diversity of species required much keying and identification work. The data were filed in folders to await more detailed analysis during the colder winter months.

Other students tracked wildlife by day and by night in the fall, winter, and spring. One evening a small group came face to face with a young white-tailed deer. The animal and the students stood frozen, staring at each other before the deer broke and bounded up over a ridge. A great horned owl, red-tailed hawk, and woodcock, all unusual inhabitants of the gorge, were seen during a bird census. Herons and ducks were also spotted, soaring overhead as they flew to the river, canal, and the floodplain marshes. One day the students carefully collected the bleached remains of a small animal that they later identified as a rabbit.

The Burger Preserve provides a rich habitat for spring wildflowers. Students visited the sanctuary each week to record the name of every new species that blossomed. When their budget allowed, they also took color slides of many of the flowers.

Students also worked with members of the Soil Conservation Service on a variety of soil studies. With the help of a geologist, they pieced together the geologic history of the preserve, which was revealed by the exposed shale layers in ravines and by scattered rocks and boulders on hillsides. They learned that the boulders are deposits of a glacial period when ice from the north carried the huge rocks south from Canada, then melted leaving the boulders stranded.

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The Nature Conservancy is a national conservation organization whose resources are entirely devoted to the preservation of land.

The Conservancy's General Fund helps provide the resources necessary to defray the organization's annual operating expenses. It is dependent upon public support.

Only with your help can the Conservancy meet the increasingly complex and urgent demands of natural area conservation.

Please give to the General Fund. Your donation can make a difference in the future of our environment.

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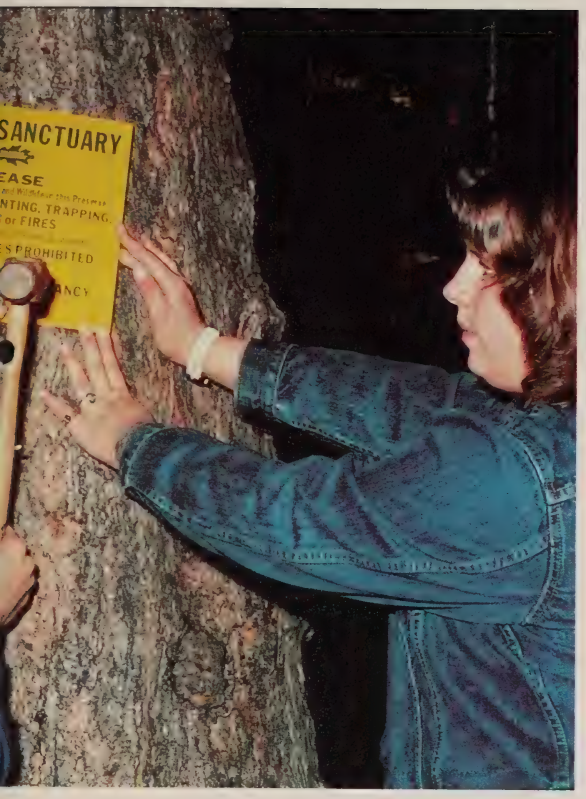


The Student Stewardship Program involves both classroom and field activities. Top left: Study sites are marked on a base map so that future participants can return to the same areas and findings can be compared year after year. Top: Preserve committee members invite students to help with stewardship tasks, such as posting signs. Above: Students conduct an inventory of the preserve's vegetation.

In analyzing the water of two small streams which cross the preserve, students collected the small invertebrates that clung to the rocks and closely scrutinized the animals to identify them. A chloride test of the creeks revealed that during the winter months highway runoff filled one of the streams with road de-icing compounds.

Spring came and the students realized that they would have to put all their data together. Collecting, organizing, and summarizing all the information required several weeks' work. Students even published an eight-page brochure on the Burger Preserve, illustrated with photographs they had taken. Copies of the brochure were very proudly distributed to the Conservancy, Cleveland Metro Parks, and interested community members.

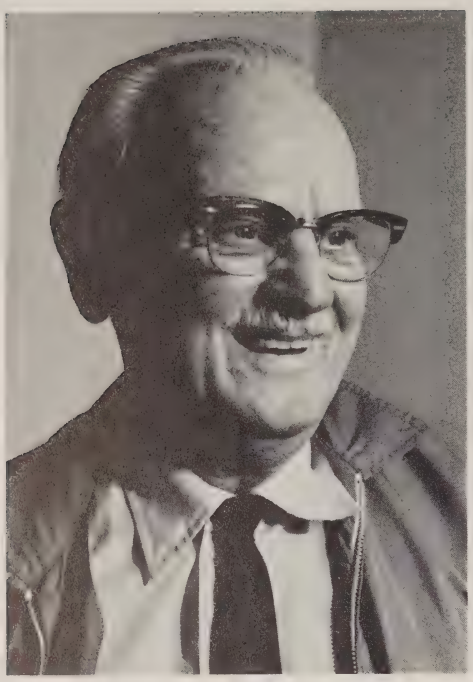
The opportunities for study on the Burger Preserve were and are endless. A year was simply not enough time for all that could be learned. After all, 38 acres is not a small plot when studying the interdependence of all life forms.

The first test of the Student Stewardship Program has been a new and exciting adventure in learning. However, such an undertaking is not without problems. Students had never before worked on such a far-ranging project. They had to learn to organize themselves, set goals, budget time, locate resource people, and meet group-imposed deadlines. The tasks often weren't easy. The student chairperson was always busy setting goals with the group and motivating individuals to continue working even during the cold, snowy days of winter.

Keeping it all together was not a small job for the teacher advisor either, who had to meet with students after school hours, plan with the student chairperson, and visit the preserve to assist in the investigations.

By the end of the school year, the students involved in studying the Burger Preserve had learned a great deal about themselves. A few had worked night and day on the project and were still so enthusiastic that they were ready to tackle another year. Some learned that studying a total natural community amounted to far more than just walking through the forest and enjoying the music of birds.

We are all excited with what has been accomplished and learned. We're particularly proud of the brochure detailing the history, geology, habitats, and wildlife of the Burger Preserve. Only the students involved in the program will know how much work was done to enable them to write that small booklet . . . but now one more preserve is understood. Even better, we know that because of the students' efforts, the local community is aware of this valuable little emerald, and the sanctuary will be better respected and protected in the years to come.



Rodney Johnson

THE MAN BEHIND THE ENDOWMENT

by Ray Culter, Vice President, Stewardship

A year ago this fall, two University of Florida students, Charles Dutoit and Dennis Ojima, were exploring the lush hammock forest community of the Conservancy's Theodore Roosevelt Preserve. While identifying and recording the forest's diverse species of plants and trees, they found a shoestring fern (*Vittaria lineata*), a species that is representative of a tropical family of ferns. It was an exciting discovery because the fern is very rarely found as far north as subtropical Florida.

Finding an uncommon species is a rare occurrence; but it isn't unusual to discover students doing similar inventories on other Nature Conservancy preserves throughout the United States. Their research and many other stewardship-related activities are largely the result of the generosity of Rodney Johnson.

Little is really known about Mr. Johnson or exactly why he chose the Conservancy as the primary benefactor of his estate. We do know, however, from his letters, that he respected and loved the wilderness with an intensity that made him hope to save as much of it as possible.

In one of his letters, Mr. Johnson reminisced about a stint he did as a young man with a crew surveying the Brazos River in southeastern Texas. The Brazos originates just southwest of Houston, meanders for about 80 miles and flows into the Gulf of Mexico near Freeport. Since the surveyors had no vehicles, they carried their cumbersome equipment on their shoulders up and down the rugged corridor of the Brazos River. Despite the long days of hard labor, Mr. Johnson remembered them fondly, recalling the cool mornings when he woke up on the river's banks to an alarm clock of chattering mockingbirds.

Mr. Johnson later became an attorney and practiced in Texas, his home State. After retiring, he moved to New Beach, California.

While living in California, Rodney Johnson learned about the Conservancy. He often met with Huey Johnson, then Director of the Western Regional Office, and affirmed interest in helping the Conservancy save natural lands. The attorney subsequently donated $300,000 to the Conservancy, to be used in establishing a wilderness fund for acquisition and protection of unique natural areas. The first site preserved under the fund was a 160-acre tract known as Five Lakes in Placer County, California, purchased in 1969. Now known as the Rodney Johnson Preserve, the area lies in the high mountains of the Sierras above Lake Tahoe. Since the property was an inholding of the Tahoe National Forest, the land was transferred to the U.S. Forest Service at cost, and the proceeds were used to establish the Northern California Coast Range Preserve Stewardship Fund.

But Mr. Johnson wasn't satisfied with his first donation. In addition to assisting the Conservancy in acquiring wilderness areas, he was also concerned about the organization's ability to care for and manage the thousands of acres it had pre-

served and retained. He felt there was a definite need to establish a fund specifically for preserve management, and he set about doing exactly that. Unfortunately, on October 30, 1971, before his plans were complete, he died. But he had not forgotten the Conservancy. Not long after his death, The Nature Conservancy learned that it had been named the primary beneficiary of Rodney Johnson's estate.

Over the next couple of years, as the estate was being settled, the Conservancy's staff held a series of meetings to determine how Mr. Johnson would have liked the funds used. An important decision was reached—of the $1 million received, $350,000 would be used to establish The Rodney Johnson Stewardship Endowment, $200,000 would be placed in the Project Revolving Fund, and the balance would then be deposited in a Conservancy natural areas account.

The Rodney Johnson Stewardship Endowment has proven to be the foundation upon which the Conservancy's national stewardship program is built. The endowment yields about $19,000 a year. These funds are made available to regional and chapter offices and preserve stewardship committees, which submit proposals to the National Office for stewardship grants. In most cases, grants are matched with funds raised by the recipient for new and innovative stewardship programs. The money is not used for salaries, or for general administrative or normal operating expenses.

During the endowment's five-year history, over 109 separate grants have been made. Sixty of these were made for hiring student interns to assist stewardship committees in completing inventories and master plans for Conservancy-owned preserves. Other grants went towards specific scientific research, environmental education programs, and other projects, such as workshops and preserve brochures.

One of the first endowment grants in 1974 went to Ron Killian, then studying at Cornell University. A Conservancy volunteer for many years—and now Assistant Stewardship Director for the Eastern Region—Ron is aware of how important it is to complete a sound inventory and master plan for a preserve. Without such recorded information, it is impossible to make stewardship decisions for a sanctuary. At the same time, Ron realized that an inventory is a complex and baffling undertaking for most volunteers, one that many committees find impossible to finish. To help overcome these problems, Ron requested a grant from the Conservancy to prepare an "Inventory and Master Planning Slide Show" that would assist volunteers in the planning process. His final product was so complete and thorough that copies were reproduced and are used by Conservancy Chapters and volunteer stewardship committees across the nation.

In 1978, two Rodney Johnson grants were awarded for research on endangered species. Dr. Stanley Sisson of Southwest Texas State University received a grant to study the aquatic ecosystem at Ezell's Cave. The Rodney Johnson funds were boosted by an equal amount from the Texas Chapter and an additional donation from the U.S. Fish and Wildlife Service's Endangered Species Grants-In-Aid Program. Dr. Sisson's research will help the Conservancy protect the Texas blind salamander and other endangered species that exist in the cavern. The second grant went to the University of Minnesota for research on the federally endangered Dakota skipper at the Hole-in-the Mountain Prairie. The Minnesota Chapter doubled the amount of the grant. Information gained from this study will help safeguard the endangered butterfly for which the property was acquired.

Other programs and studies financed through the Rodney Johnson Stewardship Endowment include creating a self-guided nature walk on the Kenrose Preserve in eastern New York, completing a camping impact study on Maine coastal islands, training high school students as field guides for the Upland Farms Preserve on Long Island, and establishing the Lake Forest Preserve's Environmental Education Program through the Lake Forest School District in Illinois. The program in Illinois has been so successful that it is now in its third year.

Since the endowment was established, almost $62,000 has been distributed across the country for Conservancy stewardship purposes. An additional $89,000 was raised to match the Rodney Johnson funds. Competition for the grants is keen, especially since the Conservancy's stewardship responsibilities are increasing as it cares for more and more areas. Proceeds generated from the original endowment have been far outstripped by the annual requests. Consequently, hundreds of exciting projects must be denied each year because funds are not available. In order to meet these growing requests, the Conservancy must double the size of the Stewardship Endowment over the next two years, from $350,000 to $700,000.

Acquiring an area does not insure its preservation. Only through proper management and use, careful studying and planning can we adequately protect a natural area. Contributions to the Stewardship Endowment help provide the funds needed to safeguard Conservancy preserves and also enable students and volunteers to carry out innovative and exciting programs, which, in turn, benefit the sanctuary and the community.

Black Pond Saved Again

Decades before it was the fashionable thing to do, the late William G. "Cap'n Bill" Vinal was aware and concerned about conservation. He had been a naturalist-ranger in Yosemite, Glacier, and Crater Lake National Parks, and professor emeritus of Nature Education at the University of Massachusetts. As early as 1939, Cap'n Bill was trying to arouse interest in saving Black Pond, which is located in his hometown, Norwell, Massachusetts.

Besides being a glacial kettle—a steep hollow formed by the glaciers as they receded from New England approximately 10,000 years ago—Black Pond is a quaking bog, a bog which is so overgrown with peat moss that the vegetation forms a thick sponge-like mat across the top of the water. The bog supports a fragile plant community that includes Atlantic white cedar, unusual pitcher plants, round and spatulate-leaved sundews, calopogon and rose pogonia orchids, swamp loosestrife, cotton grass, and Virginia chain fern. Relatively undisturbed, Black Pond is one of the few remaining glacial kettle-hole ponds in the state

Cap'n Bill spent many years trying to save the pond—by negotiating to acquire the land, writing hundreds of letters and newspaper articles, and by leading a local fund-raising drive that amassed over $3,600. On June 2, 1962, he finally tasted success when the Black Pond Nature Preserve was dedicated by The Nature Conservancy as its first Massachusetts sanctuary.

Under Cap'n Bill's guidance, a small group of volunteers looked after the 55-acre preserve and made it available to the public for outdoor education and light recreation. Unfortunately, vandalism, littering, and misuse over subsequent years took its toll on the delicate little sanctuary—it gradually deteriorated.

Early in 1976 David Blanchard, who was then stewardship director for the Conservancy's Eastern Regional Office, took steps to rekindle interest in Black Pond. Of course, the preserve's original champion was contacted first, but at 95 Cap'n Bill no longer had the strength to leave his home. Other volunteers were contacted, and they in turn sought additional help in the community.

The first meeting of the new Black Pond Stewardship Committee was held on March 24, 1976. From the very beginning, the group was dedicated and enthusiastic. Thanks to an active publicity campaign, community members quickly became aware of the plight of the preserve and more volunteers were recruited.

On occasion a drastic step must be taken to protect an area; in this case, the Committee decided that the bog could be saved only by closing the preserve. A two-year closing was anticipated, but it

Rose pogonia

will probably be three years before Black Pond can be reopened. The resting period is giving the preserve a chance to begin restoring itself, while allowing the Committee to make plans for further corrective action. The initial plans were to clean the property of debris, raise much-needed stewardship funds, create a master plan for protecting and using the preserve, and build a new boardwalk to protect the bog mat.

The Committee knew that outside expert assistance would be needed to provide some of the scientific information necessary to properly plan for the preserve. Consequently, the U.S. Soil Conservation Service was contacted and agreed to help identify the preserve's soils and their possible uses, and provided aerial photos and ideas for developing an outdoor recreation program for the sanctuary. David Scott Middleton, an environmental intern from the Massachusetts Aubudon Society, was hired in the summer, 1977, to inventory Black Pond's natural and cultural features and to prepare a long-range master plan.

Middleton's three months of research and discussions with the Committee produced a master plan that proposes three basic objectives for preserving the bog-pond: 1) *Protection* of the "characteristic species of vegetation and wildlife that are native to the Black Pond community," 2) *Accommodation* by promoting Black Pond "as a tool for fostering an understanding and appreciation of the functioning of natural systems by accommodating scientific research, nature education, and passive recreation," and 3) *Management* by taking steps "to restore the area to an unblemished condition and to keep future improvements and environmental manipulation minimal."

Of course hiring an intern and building a boardwalk required funds. The Committee's first attempt at fund raising was participating in the annual "Sunday 'Round the Common" Fair, sponsored by the Norwell Junior Chamber of Commerce. The sales booth was so successful that it has continued as an annual Black Pond fund-raising event, featuring home-baked delights, hand-crafted items, and plants. A slide show presentation of the preserve and its natural features has been created and used to approach local organizations and clubs for financial support. Meanwhile, donations continue to arrive in answer to publicity in the Conservancy's regional newsletter and local news articles. The Committee's latest fund-raising effort is "Friends of Black Pond," a newly established program that not only solicits individuals directly for cash contributions, but also provides a source of new members and volunteers for the Black Pond Stewardship Committee.

Members of the Stewardship Committee meet six times a year, in addition to getting together for an annual spring clean-up, the Norwell fair in July, and the annual meeting to plan future activities and elect officers. The Committee's tireless efforts and resounding success were recognized nationally when the Black Pond Stewardship Committee was presented with the Conservancy's 1977 President's Award for being the most outstanding stewardship committee of the year.

Another significant change is underway for the Black Pond Nature Preserve. The Committee and the Eastern Regional Office are negotiating a lease of the preserve to the Massachusetts Audubon Society. Under the proposed lease, the Stewardship Committee would continue as the volunteer management committee for the sanctuary, but would serve a dual role as well: protecting the Conservancy's interests and furthering the proper use and development of the preserve as the Society's sanctuary committee. This arrangement not only will assure additional professional attention to Black Pond, but also will strengthen a growing cooperative relationship between the two organizations and still offer the volunteer an interesting and challenging role.

Cap'n Bill would be pleased. After 40 years of perseverance, temporary overuse and neglect, and a resurgence of local interest, the Black Pond Nature Preserve has achieved the kind of vitality that he envisioned.

The Volunteer Steward

Professional staff and committed volunteers are equal partners who contribute to the success of The Nature Conservancy's Stewardship Program. But, although the Conservancy's professional staff offers guidance and expertise in management practices, it is ultimately the volunteers' personal involvement and first-hand knowledge of local issues that are the keys to successful land protection.

What motivates a volunteer? Why does a person voluntarily commit time, effort, and quite often, money, to help preserve natural areas owned by a distant organization? The reasons are as individual as the preserve stewards who shared their thoughts with the *News* about their work and why they chose to commit themselves to the Conservancy's goals on a personal level.

Gene and Arlene Rosenthal, husband and wife, serve as leaders of the Darwin James and Louis Clark Preserve Committee. The preserve's stewardship program is as old as the Long Island Chapter itself. Three years ago, Gene and Arlene had not heard of The Nature Conservancy, but today they are active, committed preserve stewards.

The personal involvement of volunteer stewards is a key to successful preserve protection.

The Rosenthals were self-described "nonparticipatory members in many conservation organizations," reaping "vicarious satisfaction from the work of others without any personal sense of accomplishment." Furthermore, they recall, "We would read about enormous tracts of land being set aside all over the country, but we might as well have been reading about a different planet for all that it meant to us. Meanwhile, the land immediately around us was rapidly being claimed by the bulldozer.

"One day, the Long Island Chapter issued a direct call for help from its membership. We found this to be most unusual, because never had any organization personally asked us to do anything but donate money and write our Congressmen. In a room filled with eager, excited people, we listened to what the Conservancy was attempting to do on our home—Long Island—and we immediately became involved.

"Our new philosophy is very simple: wilderness does not stand a prayer of being preserved in the long run if people never experience it. If we give up those lands that are under the most pressure from the developers and acknowledge defeat, the large tracts will eventually fall, in turn, from the same pressures. But how can we teach people an appreciation and understanding of the wilderness if it bears no relationship to their daily lives?"

The answer, the Rosenthals believe, is to foster preservation values on a local level, where change can be seen and the effects of growth and development personally experienced. About preserving the Long Island's natural area buffer zones, the Rosenthals said, "The skirmish lines are so tightly drawn that we can literally 'see the whites of their eyes'. We hold on and we learn. . . . If these small but

The Rosenthals view the Darwin James Preserve as "an oasis which will remain that way as long as there are volunteers to protect it . . ."

significant parcels of land can be made into functioning sanctuaries for the preservation, appreciation, and study of the natural world, the local people will be far more sympathetic to the problems of preserves in remote areas that they might never see."

Speaking about their own commitment, the Rosenthals added, "Volunteerism, on the level that we are trying to maintain, is more a matter of personal commitment than anything else. We simply feel that if we do not commit ourselves to the land, then the land itself will make us pay for our negligence in the future."

The Rosenthals believe that the small size of their preserve does not mean it is less likely to have management problems; rather, "unique situations require unique solutions. Also, the lessons we learn here on how to buffer the edges of small sanctuaries will prepare us as the noose tightens around the larger ones."

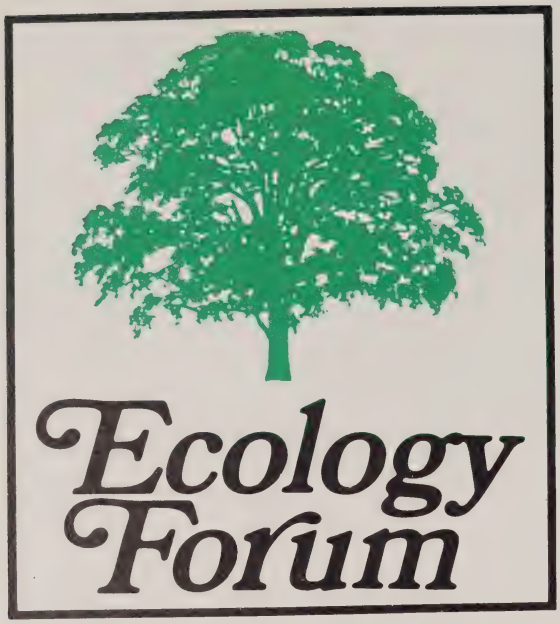
What the Rosenthals say about the area they manage could be true for all preserves—preserves that are dependent upon the commitment of dedicated volunteers: "Our sanctuary is an oasis which will remain that way as long as there are volunteers to protect it—volunteers who ask for no more than a sense of purpose and who get a strong feeling of satisfaction and accomplishment from that purpose."

Businessman Henry Fox had no connection with the conservation movement until he became involved with the Conservancy. Today he is a trustee and is in charge of the Long Island Chapter's Stewardship Program. He feels that while much has been written about stewardship on a technical level, the human factor has been overlooked:

"Let's face it . . . in managing a sanctuary you are also dealing with people—your stewardship committee and possibly the preserve's neighbors. With our volunteers, there truly exists a bond of sociability, companionship, and stimulating purpose.

"In fact, many of us joined The Nature Conservancy for the opportunity of enjoying the outdoors with new-found friends who share our feelings. . . . You meet, and minutes later you are in the woods clearing trails, identifying plants, marking boundaries, or thinking of future educational uses for the preserve. Your day ends with a planning discussion of a future meeting, smiles, handshakes, and a very good feeling about your day and what you've accomplished."

In recent years, the emphasis on preserve stewardship has increased, particularly in highly urbanized areas. Development pressures have placed a greater demand on our stewardship resources and made preserve stewards' jobs even more challenging. However, this new challenge gives the Conservancy an opportunity to involve more people like Gene, Arlene, and Henry in discovering workable—and often thoroughly enjoyable—solutions to the problems of saving our natural lands.



No. 29

by Stephen H. Hartstack
Data Base Coordinator

PROVIDING THE ANSWERS: The Conservancy's Preserve Data Base

When we speak of building an ark to protect plant and animal species and their supporting ecosystems, we face a challenge far more complex than Noah's. What exactly are the significant elements of natural diversity that need to be protected? Which of these elements now exist on the 1,300 ecological reserves that are the islands of diversity The Nature Conservancy has helped to create? Furthermore, in light of our stated acquisition and stewardship objectives, to what extent are we aware of our preservation accomplishments?

We are able to address these and other important questions with the aid of The Nature Conservancy Preserve Data Base, a balanced information management system comprised of computerized records for each preserve, and extensive compiled data in corresponding manual files. Each computerized record can print on a single-page format baseline data such as name, size, and location of the area; stewardship data including ecological rating, management problems, and improvements to the preserve; and the primary botanic, zoologic, aquatic, topographic, and geologic features of the preserve ecosystem. In addition, we emphasize certain types of data, including representative vegetation communities as classified by the Society of American Foresters (SAF) and A. W. Küchler, and special species such as those on federal or state threatened, rare, or endangered lists.

Since 1977 when initial compilation and data entry began, the Preserve Data Base Program has been funded by the Weyerhaeuser Family Foundation. In two years we have placed over 150,000 items of data into computer storage. On request the computer locates and reads the data on the storage disk and then prints the information, all in as short a time as a few minutes. Print options include modules of related data categories. For example, one module prints the reason for an area's preservation, along with its current type of use, and overall ecological rating. Another module prints taxpayer, tax exempt status, and tax reapplication or due dates.

The information we have chosen to computerize is condensed from documentation stored in the manual files. Not all data is or ought to be computerized, since information needed for decision-making via computer-recall should involve only relevant data categories. Peripheral information or data that is inefficient or too costly to computerize is appropriately housed in the manual files. We do, however, maintain an index of the various maps, species lists, photos, and other manual file contents by recording in the computer record the level of available data in each manual file. Moreover, this data is continually enriched to insure that our files are accurate and up-to-date.

The computer record thus summarizes essential preserve data and also acts as a guide to the larger quantity of information in the manual file for each preserve. Computerizing information enables storage of thousands of items of data on a comparatively tiny storage device, and expedites access to the data through programming that arranges the data into a variety of convenient formats.

More than 150 requests for information from within and outside the Conservancy have been processed this year; yet, this figure represents only a small percentage of the potential for data base use. We anticipate that the volume of requests for information will increase as people learn more about the Preserve Data Base and the three basic kinds of information services we offer.

The first service is retrieving facts from the data base. For example, a forester might want to locate and study occurrences of SAF forest-type 237 (interior ponderosa pine). We would supply the locations of the seven occurrences of interior ponderosa pine on Conservancy preserves. By checking the "available data" index in the computer record for each of these preserves, we could also supply information on existing research in the manual files, if asked to do so. Fact retrieval is always predicated

on the specified needs of the user, so that only the required information is returned.

A second request might involve listing the four most prevalent SAF-types occurring on Conservancy preserves, and the number of occurrences per type. Statistics from the data base would show that at this time SAF-type 52 (oak-hickory forest) is the most prevalent, occurring 88 times; SAF-type 60 (beech-maple forest) occurs 44 times; SAF-type 23 (hemlock forest) follows with 43 occurrences; and SAF-type 25 (maple-beech-birch forest) occurs 27 times on Conservancy preserves. This is an example of basic statistical retrieval. Only the statistic for each forest type, rather than location information or research history—as in the first example—is supplied.

Through statistical processing and manipulation of the data categories, we can uncover crucial relationships between the items of data. Continued investigation of the SAF classification reveals that the four most prevalent forest types comprise 28.41 percent of the total 711 occurrences of all SAF-types noted so far on Conservancy preserves. If an acquisition priority were the preservation of at least one example of each type, we could consult the data base for the appropriate statistic, which would show that of the 156 different SAF-types, 111 (71.15 percent) are currently represented in the Conservancy's preserve inventory, and 45 types (28.85 percent) are not represented at all. (For Küchler's classification of potential natural vegetation, the statistics are: of 116 types, 72 or 62.06 percent are represented, while 44 or 37.94 percent are not.) The unrepresented types could then be targeted for acquisition, especially if we know that these types are also not protected by other private and public conservation organizations.

Is the lack of certain representative SAF-types or Küchler-types on Conservancy preserves notable? Is the prevalence of some forest types indicative of acquisition priorities, or merely the relative abundance of the particular type? Analysis of the cause-and-effect relationship between acquisition policy and history, using facts and statistics from the data base, is an example of the third type of Preserve Data Base use. A report can then be produced based on the interpretation of facts and statistics from the data base, and from the corroboration of knowledgeable Conservancy staff.

The purpose of the Preserve Data Base, as demonstrated in the examples above, is to meet information needs with facts, statistics, and analysis. Many other data categories and classification systems in the Preserve Data Base can be investigated in much the same way as the SAF forest-types classification. Indeed, it is imperative that we make such investigations to help assure our existence as a conservation organization. For instance, in order to justify our continued stewardship of many preserves, we must demonstrate that a preserve's current use is consistent with our stated objectives in preserving it. Statistics and documentation of the kind showing that 219 or 35.15 percent of Conservancy-owned preserves are used for education as called for in acquisition and master plans are excellent for this purpose, and also help provide an overview of the progress of Conservancy educational programs across the country. Furthermore, under challenge to real property tax exempt status, maintenance of preserve use information becomes an important type of stewardship defense. It is vital that we scrutinize the data we collect about the preserves that are our responsibility, and use the results of our examinations to guide our actions. Through such investigations we will come to understand not only our preservation accomplishments but also important land conservation objectives and challenges.

ROBERT E. JENKINS RECEIVES CONSERVATION AWARD

Robert E. Jenkins, Vice President for Science of The Nature Conservancy, is a recipient of one of this year's American Motors Conservation Awards in the professional category. The honor recognizes Dr. Jenkins' key role in the development of the effective State Natural Heritage Programs and their positive impact on the preservation of natural diversity. He has been with the Conservancy since 1970. The American Motors Conservation Award was established in 1953 to recognize dedicated professionals and volunteers and to focus public attention on conservation programs.

RHODE ISLAND, WYOMING, ARKANSAS NEW HERITAGE STATES

Rhode Island, Wyoming, and Arkansas have launched State Natural Heritage Programs, bringing the total number of programs now underway to 15. The three programs are joint Conservancy-State ventures, with the Conservancy cooperating with Rhode Island's Dept. of Environmental Management, Wyoming's Environmental Quality Department, and the Natural Heritage Commission of the Arkansas Dept. of Natural and Cultural Heritage. Although widely separated geographically, these states have found a similar practical appeal in the Heritage method of identifying outstanding natural areas and setting priorities for their protection.

NEW PROJECTS

Arizona

BABOQUIVARI (Pima County). Providing the only open trail access up the Baboquivari Peaks, this 640-acre parcel is a cooperative purchase with the Bureau of Land Management which will manage the area. The north-south ridge of the Baboquivari Mountains ranges in elevation from around 4,500 feet to the focal point, Baboquivari Peak, which rises to 7,730 feet above sea level. The land provides habitat for the mountain lion, and has been rated by the Bureau of Land Management as one of the three most important areas in the state.

California

SANTA ROSA BIGHORN SHEEP PRESERVE —Additions—(Riverside County). Twelve sections totaling 7,675 acres provide excellent habitat for desert peninsular bighorn sheep and serve as a good undisturbed example of low desert flora. The area, which is generally steep, rugged mountain terrain, will be transferred to the California State Wildlife Conservation Board for addition to the state's 11,459-acre preserve. The California Field Office will manage the area until it is transferred.

Georgia

SILICO RICE FIELDS (Camden County). A gift from the Union Camp Corporation, the 1,734-acre property supports both freshwater and brackish ecosystems and lies entirely within the coastal plain. Vegetation includes rice cut grass (*Zizaniopsis mileasee*), wild rice (*Zizania aquatic*), and spider lily (*Hymenocallis*). The marsh abounds in reptiles and amphibians including alligator, and a variety of birds including wood duck and heron. The University of Georgia School of Forest Resources will manage the area and use it as an environmental education center.

Idaho

BIRDS OF PREY—Addition—(Ada County). The Conservancy is purchasing key private inholdings within the Snake River Birds of Prey Natural Area managed by the Bureau of Land Management. The area provides habitat for the densest nesting population of birds of prey in the world. The 126-acre inholding, along with the rest of the preserve, will protect valuable nesting habitat and hunting territory for the 566 pairs of 14 species of birds of prey including the golden eagle, prairie falcon, and ferruginous hawk. The inholdings will be held as a Conservancy preserve with the possible transfer of some of the lands to BLM at a future date.

Indiana

FOX ISLAND (Allen County). Located six miles from Ft. Wayne, this area of 60 acres lies adjacent to the Fox Island Nature Preserve, a 381-acre area owned by the Allen County Parks and Recreation Board and dedicated as an Indiana State Nature Preserve. Though not part of the natural area, the addition is essential to control access and take recreational pressure off the preserve. Fox Island contains a forested sand dune rising 40 feet above a marsh, as well as a dunestand of black oak. Management of the area will be the responsibility of the Allen County Parks and Recreation Board.

Maryland

BLACKWATER NATIONAL WILDLIFE REFUGE—Addition—(Dorchester County). On the Chesapeake Bay side of the Delmarva Peninsula, the 853-acre addition brings the total of Conservancy additions to the refuge to over 3,000 acres. The area provides habitat for three endangered species: the southern bald eagle, Delmarva fox squirrel, and red-cockaded woodpecker. The refuge and its marshlands along the Blackwater River provide shelter for a variety of migrating waterfowl especially Canada and snow geese. Identified as a top protection priority by the Smithsonian Institution's 1974 Chesapeake Bay Inventory, the property was transferred to the U.S. Fish and Wildlife Service for management.

POCOMOKE—Addition—(Worcester County). Swainson's warblers, and a wood duck breeding ground can be found among the bald cypress, white cedar, and magnolia on the 1,429-acre property. Rated as the number three priority in the Smithsonian Institution's Chesapeake Bay Survey, the property will be transferred to the Maryland Department of Natural Resources for inclusion in Pocomoke State Forest.

Michigan

SKEGEMOG LAKE WILDLIFE AREA—Addition—(Kalkaska County). The 80-acre tract is a key addition to 3,000-acre Skegemog Lake Swamp. The extensive swamp and marsh area provides habitat for bear, bobcat, river otter, massasauga rattlesnake, and coyote, and is a nesting site for osprey, loons, swans, and other birds. When this property and another 80 acres owned by the Conservancy are transferred to the state, the Michigan Department of Natural Resources will dedicate the land as the Skegemog Lake Wildlife Area.

Minnesota

CHIPPEWA PRAIRIE — Addition — (Chippewa County). The 40-acre tract connects the Conservancy's two separate sections of the existing Chippewa Prairie, bringing the total area to 769 acres. Lying on an abandoned terrace of glacial River Warren, the prairie is the site for the reintroduction of the greater prairie chicken into west central Minnesota. The Minnesota Chapter, which is fundraising for the purchase, will manage the area. Chippewa Prairie is a unit of the Ordway Prairie Preserve System.

New York

MEYER SANCTUARY—Addition—(Westchester County). In an exchange agreement, the Lower Hudson Chapter acquired 15 acres of swamp and upland for addition to the Meyer Preserve. The woodland preserve, now totaling 315 acres, is managed by the Butler Sanctuary Committee.

THOUSAND ACRE SWAMP — Additions — (Monroe County). Containing habitats that range from moist swamp to dry, stony upland forests, Thousand Acre Swamp supports over 280 species of plants as well as harboring the locally rare massasauga rattlesnake. The Thousand Acre Swamp Committee acquired two additions totaling 15 acres, enlarging the preserve to over 100 acres. The Committee won a 1978 stewardship award for its management, fund raising, and acquisition efforts for the area.

Ohio

ABNER HOLLOW—Addition—(Adams County). The 24-acre buffer provides habitat for the uncommon green salamander (*Aneides aeneus*) and four-toed salamander (*Hermidactylium scutatum*). Red cedars cap one exposed sandstone knob in the rugged terrain. Several rare plants, including walking fern (*Camptosorus rhizophyllus*) have been recorded in the area by the Ohio Natural Heritage Program. The area will be transferred to the Cincinnati Museum of Natural History for management. Abner Hollow now totals 484 acres.

GLEN HELEN (Greene County). The Ohio Chapter, in cooperation with the Glen Helen Association, purchased this inholding of less than an acre in the Glen Helen natural area of Antioch College. The area is on the floodplain and shore of the Little Miami National Scenic River and will be managed by Glen Helen of Antioch College.

PICKERINGTON MARSH—Addition—(Franklin County). Two tracts totaling 56 acres were acquired to complete and buffer the marsh preserve.

Water levels fluctuate greatly on the rolling terrain with several ponds and marshes giving the area the character and life associations similar to the prairie potholes further west. Over 200 species of birds have been observed at the preserve including such rarities for Ohio as the glossy ibis, European teal, whimbrel, and little blue heron. The property will be managed by the Ohio Chapter until it is dedicated as a state nature preserve.

South Dakota

MAKOCE WASHTE PRAIRIE (Minnehaha County). Makoce Washte, Indian for "Beautiful Earth," has been rated by prairie experts as an excellent native tallgrass prairie. The 40-acre tract has a fairly high relief with native wet ground forbs and grasses flourishing between several hills. Birds found on the prairie include the grasshopper sparrow, upland sandpiper, short-billed marsh wren, dickcissel, and the Wilson's phalarope. Management of the area will be the responsibility of Augustana College which will begin fundraising for the project in 1979.

Vermont

BABCOCK PROPERTY (Lamoille County). A gift of Dr. and Mrs. Robert Babcock, the 1,030-acre property consists of rugged, mountainous terrain covered with forest of beech, maple, and birch. The area has been transferred to the Vermont State Colleges for administration by Johnson State College.

Washington

SKAGIT RIVER BALD EAGLE SANCTUARY —Addition—(Skagit County). The sanctuary, now totaling well over 1,000 acres, provides habitat for one of the largest wintering populations of northern bald eagles in the Pacific northwest. The addition includes one of the most important feeding bars where as many as 75 eagles can be seen at one time. Along with the rest of the preserve, the 18-acre addition will be managed through the cooperative efforts of the Conservancy and the Washington State Department of Game. During the critical winter months there is a full-time preserve manager.

ANNUAL MEETING HELD IN WASHINGTON

Slipping past acres of soft green marshes, voyagers on the good ship Miss Jennifer chatted about the coming day's adventure: hiking the trails and combing the beaches of Parramore Island, the "jewel" of the Conservancy's Virginia Coast Reserve. The travelers made up the larger of two groups which headed to the eastern shore of the Chesapeake Bay after completion of the Conservancy's annual meeting. The second smaller group, which sampled the famed hospitality of the shore at the home of state chapter chairman Peter Black, toured Maryland sanctuaries.

The Annual Meeting itself was launched with a gala reception Thursday evening at Hillandale, home of past Board Member John Archbold. As guests of Mr. Archbold, members mingled with Congressmen and officials of the executive branch. Focal point of the evening was the introduction of two special invitees: Owyhee, a golden eagle, and Amigo, a peregrine falcon. The birds were in the company of Morlan and Pat Nelson, who were on hand to show Mr. Nelson's film on the Conservancy's Birds of Prey project.

Friday, Secretary of the Interior Cecil D. Andrus spoke to members following the presentation of awards at the Conservancy's annual dinner. In his remarks, Secretary Andrus reaffirmed the department's support for the protection of Alaskan lands.

Earlier in the day, following the election of officers and governors, Conservancy president Patrick F. Noonan gave his report to Board Chairman John Andrus, members, and friends assembled for the annual meeting. Using slides, Mr. Noonan reviewed the accomplishments of the previous year which included the completion of 172 projects, introduction of new heritage identification programs, which now number 15, and improved management for the Conservancy's 660 owned preserves.

Before the meeting ended, plans were already being made for next year's event, now tentatively set for September 19-23, 1979, in Cincinnati. Details on the meeting and associated field trips will appear in future editions of the *News*.

PHOTOS: Jim Anderson, p. 9 bottom; Whitney Beals, pp. 12 right, 21; Susan Bournique, inside front cover, pp. 4, 11; Jim Brandenburg, p. 10; Ray Culter, p. 12 left; Sharon Johnson, pp. 5 top, 7; Steve Johnson, pp. 5 bottom, 6; Dr. Lyndal Laughrin, p. 13; Tom Offutt, pp. 16-17; Al Short, p. 20.

Oak Leaf Awards 1977

Once a year The Nature Conservancy acknowledges the outstanding efforts of its members through the presentation of the Oak Leaf Award. This award, symbolized by a green and gold lapel pin, is given in recognition of especially dedicated service and support toward achieving the Conservancy's objectives.

Maurice "Red" Arnold was formerly the Regional Director of the Heritage Conservation and Recreation Service (formerly the Bureau of Outdoor Recreation) in Philadelphia. The agency administers the major federal fund for the acquisition of natural and recreational land in the United States. As Regional Director for the 13 northeastern states he personally sought to build a cooperative relationship with The Nature Conservancy which led to thousands of acres of ecologically significant land being protected through the combined efforts of the Conservancy and government.

Roy Bazire's knowledge of real estate has been a critical factor in establishing the unique and innovative acquisition program on Sanibel Island, Florida. He engineered a cooperative acquisition program that matched The Nature Conservancy, National Audubon Society, local foundation, and local government funds with federal money to acquire Sanibel Gardens. His efforts spawned the effective Sanibel-Captiva Conservation Foundation. He is a co-sponsor of the Environmental Coalition of S.W. Florida and is currently vice-chairman of the Florida Chapter.

Frank Bellrose has been instrumental in the identification and acquisition of the Illinois Chapter's Prairie Grouse Sanctuaries, Meredosia Island, and Cedar Glen Eagle Roost. One of the nation's foremost authorities on migratory habits of native American waterfowl, he has involved duck hunters in the work of the Conservancy. For 30 years he personally administered and conducted the Illinois River waterfowl census. He also serves as a consultant to industries on wetlands and waterfowl habitat.

Lynton Caldwell was one of the founding members of the Eastern New York Chapter in 1954. He went on to help establish the Indiana Chapter and served as the Chapter's first chairman for many difficult years when the idea of natural area preservation had not taken hold in Indiana. He has served on the national Board of Governors and is now a Trustee of the Indiana Chapter. Dr. Caldwell is the Arthur F. Bentley Professor of Political Science and Professor of Public and Environmental Affairs at Indiana University. He was one of the drafters of the National Environmental Policy Act and has published more than one hundred articles and monographs and six books, many on the subject of protecting the environment.

Charles Horn, Jr., has provided extensive legal services to the Minnesota Chapter since 1973. Serving on the Chapter Board of Trustees, Mr. Horn's background as an attorney combined with his knowledge of the outdoors has been of invaluable assistance to the Chapter. Mr. Horn was actively involved in all the Minnesota Prairie Chicken Preserve System acquisitions and, most recently, in negotiations for Tettegouche, a complete ecosystem of four lakes fed entirely by natural springs and rainfall.

Bruce Poundstone was the first chairman of the reorganized Kentucky Chapter. He has been responsible for the Chapter's newsletters and publications and continues on its Board of Trustees. As chairman, he led the efforts of the Chapter in the successful acquisition of Boone County Cliffs and the Spencer-Morton Preserve (Pilot Knob). Chapter membership has tripled, thanks largely to the efforts of Mr. Poundstone.

Albert Radford has served as a consultant to the North Carolina Nature Conservancy Board of Trustees and has assisted the North Carolina Heritage Program. He has developed a natural area and diversity classification system which has proved a valuable tool in establishing protection priorities. His work formed the basis for the national classification system used in connection with the new National Heritage Program. Dr. Radford played a key role in the negotiations for Bluff Mountain, the number one Heritage priority for North Carolina, and Stevens Creek, one of the top five areas in South Carolina.

Sylvan Runkel, Sr., introduced many people to The Nature Conservancy as he traveled across Iowa teaching in outdoor classrooms as a biologist for the Soil Conservation Service. A member of the Iowa Chapter since its beginning, he now serves on the Chapter's Board of Trustees. His knowledge of Iowa's natural history and natural areas makes him a valuable member of the Chapter's Scientific Advisory Board. For 10 years a member of the Iowa Preserves Advisory Board, under whose protection many Conservancy preserves are placed, he has served as chairman of the Board since his retirement.

(*continued next page*)

Rae Sanders, former Director of the Mississippi Bureau of Outdoor Recreation, was the primary mover behind the state's efforts to join the Conservancy in developing a Heritage Program to inventory the state's natural areas. As president of the National Association of State Liaison Officers he was an advocate of such programs as well as a supporter of the federal initiative to create a national inventory program within the new Heritage Conservation and Recreation Service. He also played a key role in the acquisition of 32,000 acres of the Pascagoula project in Mississippi.

Victor Scheffer was a founding member of the Western Washington Chapter and has served in some capacity, as a Board member, or officer, almost continuously since. His breadth of biological knowledge, scientist's point of view, and ability to express himself on paper or on the podium have made him a valuable asset to the Chapter. During his 32-year career in wildlife management, mostly for the U.S. Fish and Wildlife Service, Dr. Scheffer was widely regarded by his colleagues as a scientist, scholar, and world authority on the biology of marine mammals.

Harrison Tordoff, Director of the Bell Museum of Natural History at the University of Minnesota, has served on the Minnesota Chapter Board of Trustees, and was chairman of the Chapter Board from 1975 to 1977. Dr. Tordoff was instrumental in adding a Coordinator of Preserve Management to the chapter staff and in the creation of the Student Intern Program which produced detailed management plans for a number of Minnesota preserves. An eminent ornithologist, Dr. Tordoff has recently been involved in the program to reintroduce the peregrine falcon to its former nesting sites along the Mississippi River.

Alice Ulrich has been a mainstay of the Western New York Chapter since its founding in 1955. In addition to serving as the Chapter's second Chairman, Mrs. Ulrich has been co-editor of the Chapter's newsletter since the first issue. She has diligently kept membership records and has been active in Chapter public field days. She and her late husband saw the Deer Lick Sanctuary grow from its 60-acre beginning to its current 400 acres, complete with posted trails, and National Natural Landmark status. She is presently an active member of the Chapter's Board of Trustees and has served on the Board of Governors.

President's Stewardship Awards

Each year the Conservancy recognizes an individual and a committee for significant work in advancing the art and science of stewardship on Conservancy preserves.

Lloyd Hulbert serves as a key volunteer manager for Flint Hills Prairie, Dingus Natural Area, and Konza Prairie in Kansas. He has helped establish programs that encourage people from throughout the state to visit the Conservancy preserves and by doing so, to appreciate each area's importance. By focusing public attention on Konza, Dr. Hulbert encouraged management support from the state. Professor of Biology and Plant Ecology at Kansas State University, Dr. Hulbert, through the Conservancy's preserves, has worked to bring the prairie of the past into the lives of the citizens of today's Kansas.

The Arizona Project Committee, which is responsible for the Patagonia-Sonoita Creek Sanctuary, Canelo Hills Cienega Project, and Ramsey Canyon-Mile Hi Ranch, has a record of both protecting its preserves and fund raising for their future. All the preserves benefit from the Committee's well-established, systematic planning procedure and its fine working relationship with outside agencies.

The Thousand Acre Swamp Committee, although in existence for only two years, has gained widespread support in and around Penfield, New York for the wetland preserve. Following a well-founded and comprehensive master plan, the committee has developed excellent use and protection programs for the Swamp.

Annual Chapter Award

The **Illinois** and **Minnesota Chapters** have each been selected by the Board of Governors to receive a Conservancy Chapter Award for their accomplishments during 1977. The awards are presented to the volunteers and staff of both chapters for outstanding performance in a number of areas: increasing membership, protecting areas of high ecological quality, completing preserve master plans, initiating scientific and educational programs, preparing annual operating plans and budgets, and communicating information about the Conservancy's activities to members and the public.

NEW LIFE MEMBERS

An individual becomes a Life Member of The Nature Conservancy upon contribution of $1,000 for membership dues.

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Ms. Shirley Ann McGrath

Arizona
Ms. Eleanor Breed Gordon
Mr. Alexander Russell

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Mr. Peter Avenali
Mr. Owen B. Bauer
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Mr. Leet W. Bissell
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Mrs. Dimitri Dejanikus

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A corporation becomes a Corporate Associate of The Nature Conservancy upon contributing between $1,000 and $10,000 annually to the operations of the organization.

Bankers Trust of South Carolina
South Carolina
Beatrice Foods Company
Illinois
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Bevon-Herron, Inc.
California
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